

ABSTRACT OF THE DISCLOSURE

A fuel cell has a hydrogen flow path adapted to pass hydrogen into communication with an anode catalyst of an MEA. A coolant flow path is adapted to pass coolant through the fuel cell to cool the fuel cell. An enclosure encompasses at least a portion of the hydrogen flow path, the coolant flow path, or both. A hydrogen vent is adapted to vent hydrogen from the enclosure without reliance upon any electrical device. The hydrogen vent can prevent a frame front from passing into the enclosure and can be made of a porous material such as cellulose, plastic (for example, a foamed plastic) or metal (for example a sintered metal). A method of manufacturing a fuel cell includes passively venting hydrogen to maintain a hydrogen concentration level within the enclosure below about 4 percent. Additional enclosures with hydrogen vents may also be provided.